MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-28WS2B	RM-862	French	SCC-K01M-A	KV-28WS2K	RM-862	OIRT	SCC-K08V-A
KV-28WS2D	RM-862	AEP	SCC-K07N-A	KV-28WS2R	RM-862	OIRT	SCC-K20A-A
KV-28WS2E	RM-862	Spanish	SCC-K06M-A	KV-28WS2U	RM-862	UK	SCC-K04H-A

MICROFILM

TRINITRON® COLOR TV

SONY®

ITEM MODEL	Television System	Channel Coverage	Colour System
French	B/G/H, D/K, L, I	L SECAM VHF: F2-F10 UHF: F21-F69 TV CABLE TV (1) VHF: B-Q UHF: S21-S44 PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 PAL I UHF: B21-B69 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV VHF: S1-S41, UHF: S01-S05	PAL, SECAM NTSC3.58/4.43 (video input only)
AEP	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: S1-S20 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV VHF: S1-S41, UHF: S01-S05	PAL, SECAM NTSC3.58/4.43 (video input only)
Spanish	B/G/H, D/K	PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV VHF: S1-S41, UHF: S01-S05	PAL, SECAM NTSC3.58/4.43 (video input only)
OIRT	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H, H1, H2 D/K VHF: R01-R12 UHF: R21-R69 CABLE TV VHF: S1-S41, UHF: S01-S05	PAL, SECAM NTSC3.58/4.43 (video input only)
UK	I	UHF: U21-U69	PAL NTSC3.58/4.43 (video input only)

MODEL	28WS2B	28WS2D	28WS2E	28WS2K 28WS2R	28WS2U
Power Consumption	112W	112W	112W	112W	185W

SPECIFICATIONS

Picture Tube — Super Trinitron WIDE
Approx. 71 cm (28 inches)
(Approx. 66 cm picture measured diagonally)
110° -deflection

Rear/Front Terminals

[REAR]

1 21-pin Euro connector (CENELEC standard)
- Inputs for audio and video signals
- Inputs for RGB
- Outputs for TV audio and video signals

2/S 2, 21-pin Euro connector (CENELEC standard)
- Inputs for audio and video signals
- Inputs for S video
- Outputs for TV audio and video signals (selectable)

audio outputs - phono jacks
Left/Right Speaker Terminals
Surround Speaker Terminals

[FRONT]

3 , Video input - phono jack
3 , Audio inputs - phono jacks
3 , S video input - 4 pin DIN
Stereo minijack - headphone jack

Sound output

Left/Right	2x10W (RMS) 2x20W (music power)
Centre	2x2.5W (RMS) 2x5W (music power)
Surround	2x5W (RMS) 2x10W (music power)
Dimensions	798x497x531 mm approx.
Weight	Approx. 43.0 kg (with speakers)

Supplied accessories
- RM-862 Remote Commander (1)
- Batteries R6 (2)
- Surround Speakers (2)
- Surround Speakers Leads (2)

Other features
Fastext, Dolby Pro Logic
NICAM (KV-28WS2B,28WS2E,28WS2K,28WS2R and 28WSU only)

[RM-862]

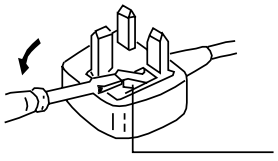
Remote control system	Infrared control
Power requirements	3V dc (2 batteries) R6 (size AA)
Dimensions	Approx. 210x56x24 mm (w/h/d)
Weight	Approx. 110g (Not including battery)

Design and specifications are subject to change without notice.

Item \ Model name	KV-28WS2B	KV-28WS2D	KV-28WS2E	KV-28WS2K KV-28WS2R	KV-28WS2U
PIP	OFF	OFF	OFF	OFF	OFF
MPIP	OFF	OFF	OFF	OFF	OFF
Rotation Coil	ON	ON	ON	ON	ON
VM Set	ON	ON	ON	ON	ON
Scart 1	ON	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON
AKB in 16:9 mode	ON	ON	ON	ON	ON
TXT	ON	ON	ON	ON	ON
FLOF	ON	ON	ON	ON	ON
TOP	ON	ON	ON	ON	ON
Norm B/G/H	ON	ON	ON	ON	OFF
Norm I	ON	OFF	OFF	OFF	ON
Norm D/K	ON	ON	ON	ON	OFF
Norm L	ON	OFF	OFF	OFF	OFF
Language Preset	French	German	Spanish	OIRT	English

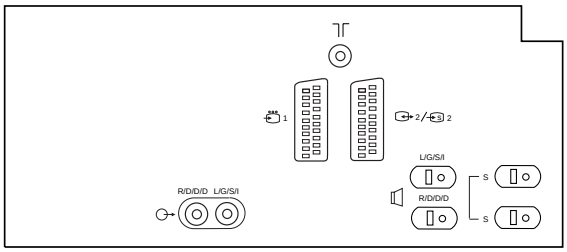
WARNING (KV-28WS2U only)

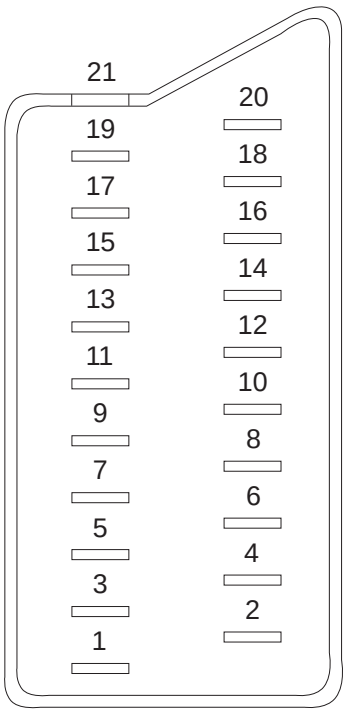
The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the ASTA mark.
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME.
IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED.
THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.
When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.
Open the fuse compartment with the screwdriver blade
and replace the fuse.

21 pin connector (1, 2 / S 2)

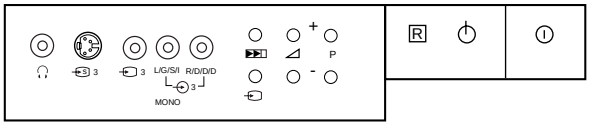




Pin No.	1	2	4	Signal	Signal Level
1	○	○	○	Audio output B (Right)	Standard level : 0.5V rms Output impedance : Less than 1k ohms*
2	○	○	○	Audio input B (Right)	Standard level : 0.5V rms Output impedance : More than 10k ohms*
3	○	○	○	Audio output A (Left)	Standard level : 0.5V rms Output impedance : Less than 1k ohm*
4	○	○	○	Ground (Audio)	
5	○	○	○	Ground (Blue)	
6	○	○	○	Audio input A (Left)	Standard level : 0.5V rms Output impedance : Less than 10k ohm*
7	○	●	●	Blue input	0.7 ± 3dB, 75 ohms, positive
8	○	○	○	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More10k ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (Green)	
10	○	○	○	Open	
11	○	●	●	Green	
12	○	○	○	Open	
13	○	○	○	Ground (Red)	
14	○	○	○	Ground (Blanking)	
15	○	—	—	Red input	0.7 ± 3dB, 75 ohms, positive
	—	○	○	(S signal) croma input	0.7 ± 3dB, 75 ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75 ohms
17	○	○	○	Ground (Video output)	
18	○	○	○	Ground (Video input)	
19	○	○	○	Video output	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
20	○	—	—	Video input	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
	—	○	○	Video input Y (S signal)	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
21	○	○	○	Common ground (plug, sheild)	

○ Connected ● Not Connected (Open) * at 20Hz - 20kHz

Pin No.	Signal	Signal Level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm, positive Sync. 0.3V -3 + 10dB
4	C (S signal) input	0.3V ± 3dB 75ohm, positive Sync.



CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION !!

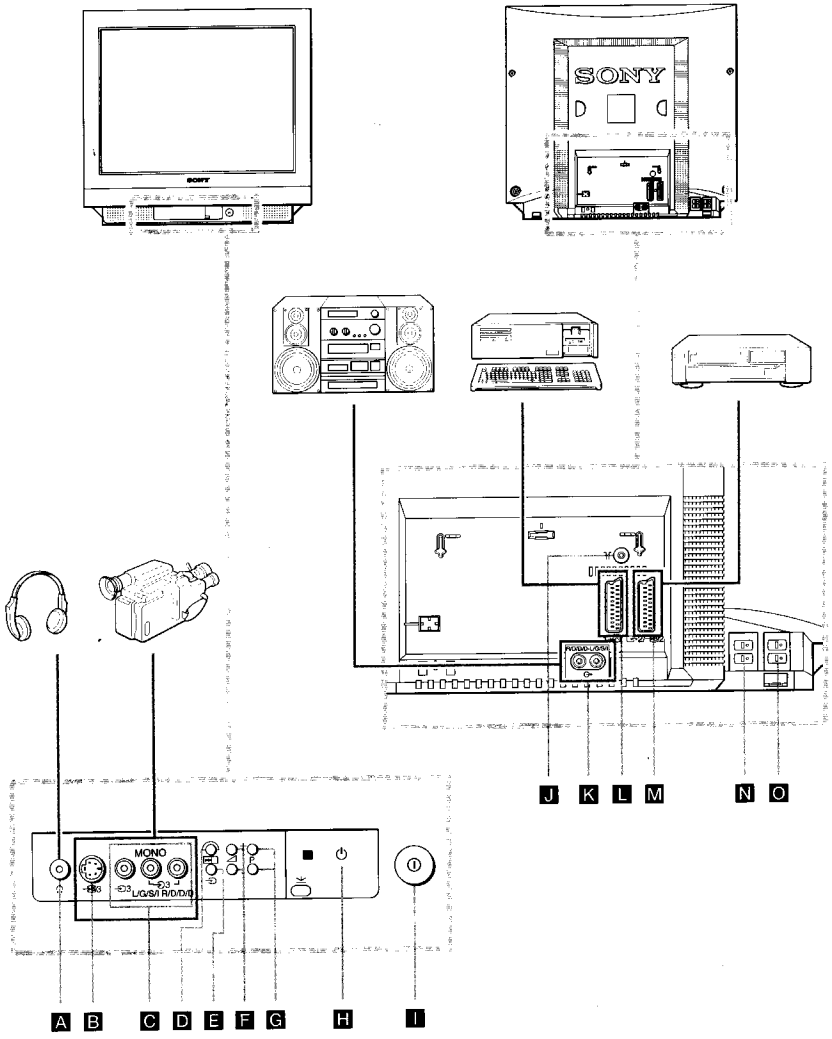
AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.
LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

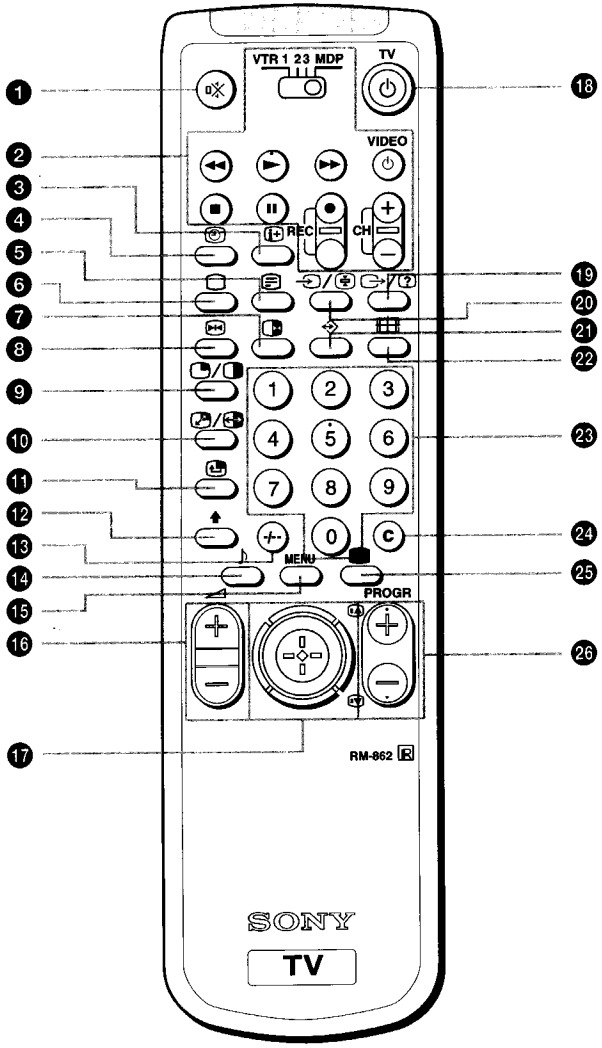
ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE PUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instructions Manual. The page numbers of the Operating Instruction Manual remain as in the manual.





Overview

This section briefly describes the controls and the buttons on the TV set and on the Remote Commander. Please open the flap at the front of the Instruction manual for illustrations of the TV set and the Remote Commander. Letters in boxes refer to the buttons on the TV set, numbers in circles to the buttons on the Remote Commander. For more information, refer to the page numbers given next to each description.

TV-Buttons and Terminals

Reference and Symbol	Name	Refer to Page
Front of the set		
A ∩	Headphones jack	33
B S 3	S video input jack	33
C 3, 3	Audio/video input jacks	33
D ▶▶	Automatic Preset button	12
E	Input mode button	14
F +/-	Volume control	13
G P +/-	Programme button	13
H ⏻	Standby mode indicator	13
I ⏻	Main power switch	13
Rear of the set		
J	Aerial socket	11
K	Audio phono jacks	33
L 1	21 pin Euro connector	33
M 2/S 2	21 pin Euro connector	33
N L/G/S/I, R/D/D/D	Left/Right speaker terminals	10
O S	Surround speaker terminals	10

Reference and Symbol	Name	Refer to Page
1	Muting on/off button	13
2	**VCR operation**	36
VTR123MDP	Video equipment selector	36
◀◀ ▶ ▶▶ ■ ❚❚ ●	Video equipment operation buttons	36
VIDEO ⏻, CH +/-		
3	On-screen display button	13
4	Time display button	13
5	Teletext button	14
6	TV power on/TV mode button	13, 14
7 8 9 10 11 12	No function on this set	-
13 - / - -	Double digit entering button	13
14 ♪	Sound mode button	20
15 **MENU**	Menu on/off button	15
16 +/-	Volume control button	13
17	Joystick for menu selection. Press to confirm selection (OK function)	15
18 TV⏻	TV standby button	13
19	No function on this set Teletext: reveal button	- 31
20	Input mode button Teletext: Freezing the subpage	14 31
21	Teletext: Favourite pages button	32
22	Button to change screen format	14
23 1, 2, ... 9, 0	Number buttons	13
24 **C**	Direct channel button	14
25	Picture mode button	20
26 **PROGR +/-**	Programme buttons Teletext: Page up/page down buttons	13 14

Step 1

Connecting the Speakers

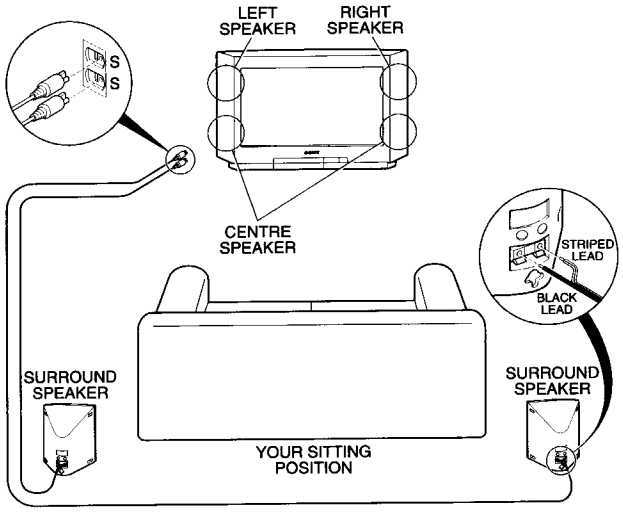
Do not switch on the TV before you connect the speakers.

Dolby (*) Pro Logic Surround normally requires 5 speakers:

Centre speaker (incorporated in the TV set)
- for anchoring the stable sound image, like dialogue, to the TV screen

Left and Right front speakers (incorporated in the TV set)
- for the normal two channel stereo or bilingual broadcasts

Surround speakers
- for the special effects created by the surround channel



Notes:

- Connect the speakers using the leads provided. The striped lead (+) is for the red terminal of the speaker and the black lead (-) is for the black terminal.
- If you use your own speakers, make sure they are at least 8Ω impedance and are magnetically shielded. Otherwise picture distortion may occur.

(*) Manufactured under license from Dolby Laboratories Licensing Corporation. DOLBY, the double-D symbol ◻◻ and "PRO LOGIC" are trademarks of Dolby Laboratories Licensing Corporation.

Step 2

Connecting the Aerial

(If you connect a VCR, skip to step 3)

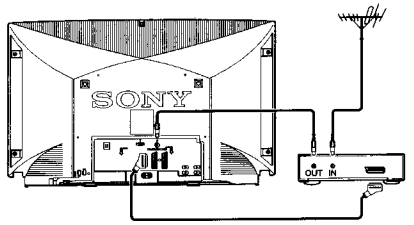
Insert the aerial plug tightly into the aerial socket ⅂Γ ■. Use a good-quality aerial cable (not supplied), corresponding to the relevant regulations.

Step 3

Connecting a VCR

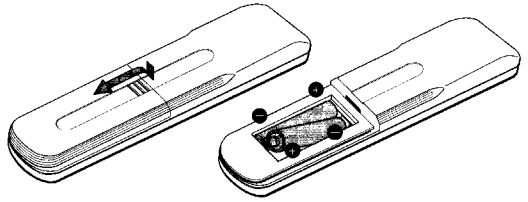
We recommend that you tune in the VCR signal to programme number "0". For details, see "Presetting Channels Manually" on page 17.

See "Connecting Optional Equipment" on page 33 for more information.



Step 4

Inserting the Batteries Into the Remote Commander



Respect your environment! Dispose of used batteries in an environmentally friendly way.

Step 5

Presetting Channels Automatically

With this function, the TV can automatically search and store up to 100 different channel numbers.

If you prefer manual presetting, refer to "Presetting Channels Manually" on page 17.

1 Plug into mains.
Press the power switch ⏻ I on the TV set.

2 Press and hold the button ⏭ D on the TV set until the automatic menu is displayed and the search starts.

After all available channels are stored, the normal TV picture is shown.

Note: Channels are automatically stored as follows:

Programme 1	BBC1
Programme 2	BBC2
Programme 3	ITV
Programme 4	CH4 or S4C

TV Operation

This section explains functions used whilst watching TV. Most operations are carried out using the remote commander (numbers in circles). All basic functions are also available on the TV set (letters in boxes). Open the flap at the front of the Instruction Manual to see the illustrations of the Remote Commander and the TV set.

To	Press
Switch on	⏻ I on TV
Switch off temporarily	⏻ ⑱ TV is now in standby mode and ⏻ H indicator on TV lights up.
Switch on from standby mode	▭ ⑥, PROGR +/- ㉖ G or any number button ㉓
Switch off completely	⏻ I on TV To save energy, switch off your TV completely when TV is not in use.
Select programmes	PROGR +/- ㉖ G or number buttons ㉓ For double digit number, press -/- - ⑬ then the number e.g. For 23, press -/- - ⑬ then 2 and 3.
Display on screen indications	ⓘ ③. Press again to make the indications disappear.
Adjust the volume	◿ + or - ⑯ F
Mute the sound	🔇 ①. Press again to restore the sound.
Display the time (only available when teletext is broadcast)	⏲ ④. Press again to make the display disappear.

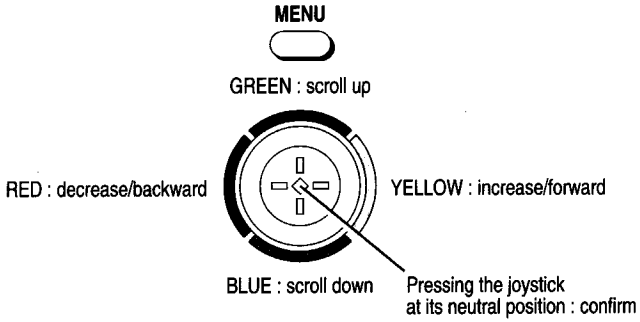
TV Operation (continued)

To	Press
Tune in a channel temporarily	C ㉔. The indication "C" appears. Enter the double digit number. e.g. For 4, press 0 then 4.
View video input picture (see page 34 for detailed information)	⇨ ⑳ E repeatedly until the desired video input appears. Press ▢ ⑥ to restore the TV picture.
Operate Screen Mode (see page 19 for detailed information)	⊞ ㉒ 4:3 —> Smart —> Zoom —> Wide When using zoom mode, select 'scroll' to see the cut-off part of the screen.
View teletext (see page 31 for detailed information)	
Switch on	☰ ❺
Select a page	three number buttons ㉓ or ☰▲ ㉖ (for next page) or ☰▼ ㉖ (for previous page).
Use fastext	Push joystick ⑰ to select a colour.
Switch off	▢ ⑥

Adjusting and Setting the TV Using the Menu

You can adjust and set various functions on the TV using the following remote commander buttons:

1 Press MENU ⑮ to switch menu on/off.
2 Use the joystick ⑰ as follows.

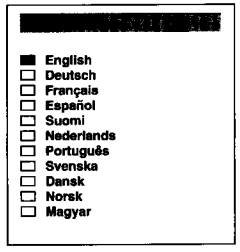


Choosing the Menu Language

This function enables you to change the language of the menu screens.

1 Press power switch ⏻ I on the TV. If the standby indicator ⏻ H on the TV is lit, press ▢ ⑥ or a number button ㉓ on the Remote Commander.

2 Press the MENU button ⑮ on the remote commander.



3 Push to blue or green to select the language you want then push to yellow.

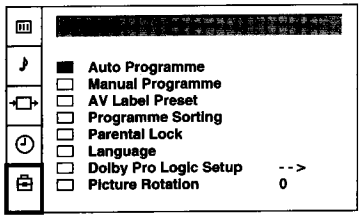
4 Press the MENU button ⑮ to restore the normal TV picture.

Presetting Channels Automatically

You may have already preset the channels automatically by using the method shown on page 12. You can also preset channels automatically by using the remote commander as follows:

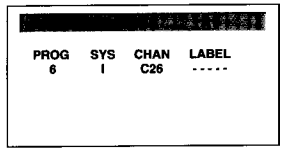
1 Press the MENU button ⓯.

2 Push joystick ⓱ to blue or green to select the symbol 🧰 on the menu screen then push to yellow.



3 Push to blue or green to select 'Auto Programme'.

4 Push to yellow and hold until the automatic menu is displayed and the search starts.
After all available channels have been preset, the normal TV picture is shown.



Note: Channels are automatically stored as follows:

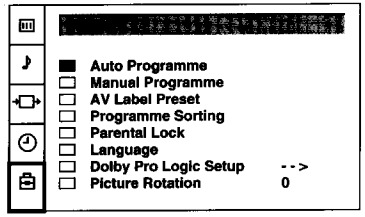
Programme 1	BBC1
Programme 2	BBC2
Programme 3	ITV
Programme 4	CH4 or S4C

Presetting Channels Manually

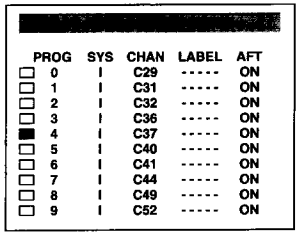
This function enables you to preset channels one by one to different programme numbers. This is also convenient for allocating programme numbers to various video input sources.

1 Press the MENU button ⓯.

2 Push joystick ⓱ to blue or green to select the symbol 🧰 on the menu screen then push to yellow.



3 Push to blue or green to select 'Manual Programme' then push to yellow .



4 Push to blue or green to select on which programme number you want to preset a channel then push to yellow.

5 Push to blue or green to select the TV broadcast system 'I' or a video input source (AV1, AV2,...) then push to yellow twice.

6 Select the first number digit of 'CHAN' (channel) then the second number digit of 'CHAN' with the number buttons ㉓ on the remote commander
or
Push joystick ⓱ to blue or green to search for the next available channel.

7 If you want to store the channel, go to step 8. If not, select a new channel using the number buttons ㉓ on the remote commander or push to blue or green to resume the search.

8 Press the joystick ⓱.

9 Repeat steps 4 to 8 to preset other channels.

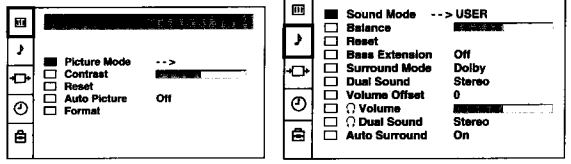
10 Press the MENU button ⓯ to restore the normal TV picture.

Adjusting the Picture and Sound

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste.

1 Press the MENU button ⓯.

2 Push joystick ⓱ to blue or green to select for picture control or ♪ for sound control then push to yellow.



3 Push to blue or green to select the desired item then push to yellow.

4 Push to red or yellow to alter the item then press the joystick ⓱.
For the effect of each control, see the following tables.

5 Repeat steps 3 and 4 to adjust the other items.

6 Press the MENU button ⓯ to restore the normal TV picture.

PICTURE CONTROL	Effect
Picture Mode	•User —> Game —> Movie —> Sports —> Live In 'User' mode, you can preset Brightness, Colour, Sharpness and Hue (NTSC signals only) as follows: **1** Push joystick ⓱ to blue or green to select the desired item then push to yellow. **2** Push to red or yellow to adjust then press the joystick ⓱. **3** Push to red to return to the PICTURE CONTROL menu.
Contrast	•Darker —— I —— Brighter
Reset	•Resets picture to the factory preset levels.
Auto Picture	•All the picture levels automatically change according to the surrounding lighting level. (Auto Picture Control)
Format	•There are three options. Format (4:3 —> Smart —> Zoom —> Wide), Scroll or Auto 16:9. To preset these, follow the procedure below. **1** Push joystick ⓱ to blue or green to select the desired item then push to yellow. **2** Push to red or yellow to change the setting then press the joystick ⓱. **3** Push to red to return to the PICTURE CONTROL menu. **Format/Scroll** Once 'Zoom' has been selected in 'Format' mode, you can then choose the 'Scroll' function to scroll the screen upwards or downwards to see the cut-off part (e.g. subtitles) **or** after selecting 'Zoom' and returning to the normal picture, push joystick ⓱ to blue or green to scroll then press joystick ⓱. **Auto 16:9** Automatically selects 16:9 picture mode when receiving a 16:9 broadcast (set to 'Off' if signal reception is weak).

Adjusting the Picture and Sound (continued)

SOUND CONTROL	Effect
Sound Mode	•User —> Rock —> Jazz —> Pop In 'User' mode, you can preset Treble and Bass as follows. 1 Push joystick ⓱ to blue or green to select the item then push to yellow. 2 Push to red or yellow to adjust then press the joystick ⓱. 3 Push to red to return to the 'SOUND CONTROL' menu.
Balance	•Left —— I —— Right
Reset	•Resets sound to the factory preset levels.
Bass Extension	•Boosts bass by a fixed amount.
Surround Mode	•Choice among special sound effects. Pro Logic —> Pseudo Stereo —> Spatial —> Club —> Theatre—> Hall —> Church —> Stadium —> Off
Dual Sound	•A: Left channel —> B: Right channel —> stereo —> mono
Volume Offset	•Presets the volume level for individual programmes. -12 —— 0 —— +12
∩ Volume	•Adjusts the headphone volume.
∩ Dual Sound	•Selects the headphone channels. A: Left channel —> B: Right channel —> stereo —> mono
Auto Surround	•Automatically selects Pro Logic Surround sound when transmitted. (set to 'Off' if signal is weak).

Changing Modes Quickly

You can quickly change the Surround Mode or the Picture Mode without entering the 'SOUND CONTROL' or the 'PICTURE CONTROL' menu.

1 Press ■ ㉕ for the picture or ♪ ⓮ for the sound.

2 Push joystick ⓱ to blue or green to select the desired mode.

3 Press ■ ㉕ or ♪ ⓮ again to restore the normal TV screen.

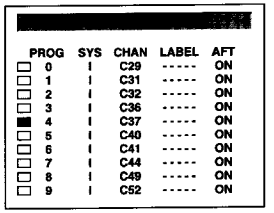
Manual Fine-Tuning

Normally, the automatic fine-tuning (AFT) function is operating.
If the picture is distorted however, you can manually fine-tune the TV to obtain a better picture reception.

1 Press the MENU button ⓯.

2 Push joystick ⓱ to blue or green to select the symbol 🧰 on the menu screen then push to yellow.

3 Push to blue or green to select 'Manual Programme' then push to yellow.



4 Push to blue or green to select the programme number which corresponds to the channel you want to manually fine-tune.

5 Push to yellow repeatedly until the AFT position changes colour.

6 Push to blue or green to fine tune the channel frequency (-15 to +15).

7 Press the joystick ⓱.

8 Repeat steps 4 to 7 to fine-tune other channels.

9 Press the MENU button ⓯ to restore the normal TV picture.

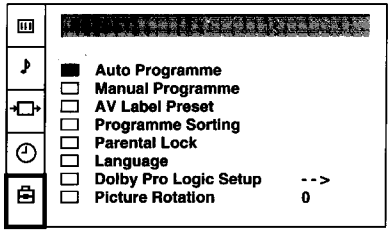
Sorting Programme Positions

This function enables you to exchange the programme positions.

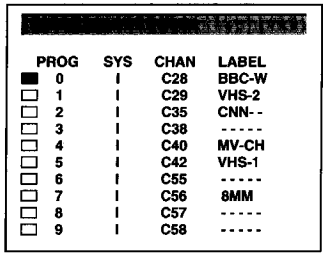
1 Press the MENU button ⓯.

2 Push joystick ⓱ to blue or green to select the symbol 🧰 on the menu screen then push to yellow.

3 Push to blue or green to select 'Programme Sorting' then push to yellow .



4 Push to blue or green to select the channel you want to exchange then push to yellow.



5 Push to blue or green to select the programme position of the channel you want exchanged then push to yellow.

6 Repeat steps 4 to 5 if you wish to exchange other programme positions.

7 Press the MENU button ⓯ to restore the normal TV picture.

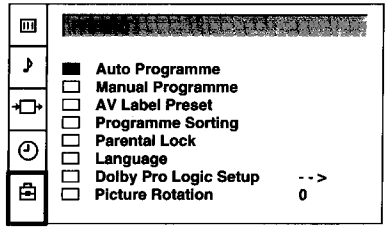
Using Parental Lock

This function enables you to prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

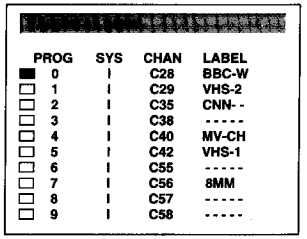
1 Press the MENU button ⓯.

2 Push joystick ⓱ to blue or green to select the symbol 🧰 on the menu screen then push to yellow.

3 Push to blue or green to select 'Parental Lock' then push to yellow.



4 Push to blue or green to select the channel you want to block then push to yellow. A symbol appears before the programme number to indicate that this channel is now blocked.



5 Repeat step 4 if you wish to block other channels.

6 Press the MENU button ⓯ to restore the normal TV picture.

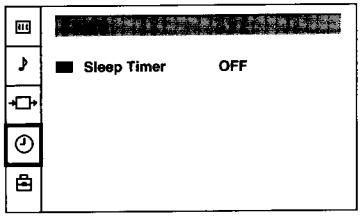
Note: To unblock, push to yellow after selecting the channel to unblock in the 'Parental Lock' menu.

Using the Sleep Timer

This function enables you to select a time period after which the TV automatically switches into standby mode.

1 Press the MENU button ⓯.

2 Push joystick ⓱ to blue or green to select the symbol ◴ on the menu screen then push to yellow.



3 Push to yellow.

4 Push to red or yellow to set time delay and press the joystick ⓱.

OFF 0:30 1:00 1:30 ..... 3:30 4:00

One minute before the TV switches into standby mode, a message is displayed on the screen.

5 Press the MENU button ⓯ to restore the normal TV picture.

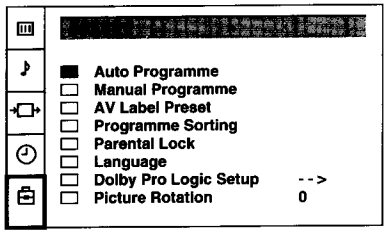
Adjusting the Picture Rotation

(KV-28WS2U only)

If, due to the earth magnetism, the picture slants, you can use the function 'Picture Rotation' to readjust the picture.

1 Press the MENU button ⓯.

2 Push joystick ⓱ to blue or green to select the symbol 🧰 on the menu screen then push to yellow.



3 Push to blue or green to select 'Picture Rotation' then push to yellow.

4 Push to red or yellow to adjust the picture rotation then press the joystick ⓱. The adjusting range is -5 to +5.

5 Press the MENU button ⓯ to restore the normal TV picture.

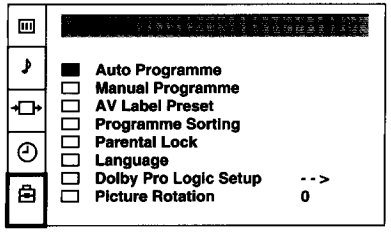
Skipping Programme Positions

This function enables you to skip unused programme positions when selecting them with the PROGR+/- buttons. However, you can still watch the channel of the skipped programme position by using the number buttons.

1 Press the MENU button ⓯.

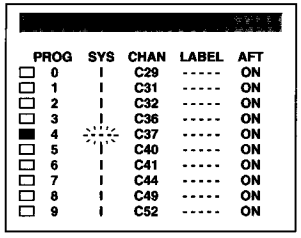
2 Push joystick ⓱ to blue or green to select the symbol 🧰 on the menu screen then push to yellow.

3 Push to blue or green to select 'Manual Programme' then push to yellow.



4 Push to blue or green to select the programme position you want to skip then push to yellow.

5 Push to blue or green until '- - -' appears in the 'SYS' position.



6 Press the joystick ⓱.

7 Repeat steps 4 to 6 to skip other programme positions.

8 Press the MENU button ⓯ to restore the normal TV picture.

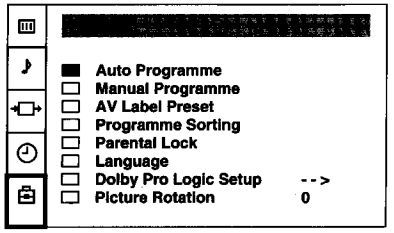
Captioning a Station Name

Names for channels are usually automatically taken from teletext if available. You can however name a channel or an input video source using up to five characters (letters or numbers).

1 Press the MENU button ⓯.

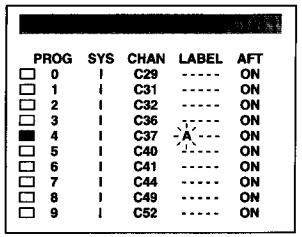
2 Push joystick ⓱ to blue or green to select the symbol 🧰 on the menu screen then push to yellow.

3 Push to blue or green to select 'Manual Programme' then push to yellow.



4 Push to blue or green to select the channel you wish to caption then push to yellow repeatedly until the first element of the 'LABEL' position is highlighted.

5 Push to blue or green to select a letter or number and push to yellow (select '-' for a blank). Select the other four characters in the same way.



6 After selecting all the characters, press the joystick ⓱.

7 Repeat steps 4 to 6 to caption names for other channels.

8 Press the MENU button ⓯ to restore the normal TV screen.

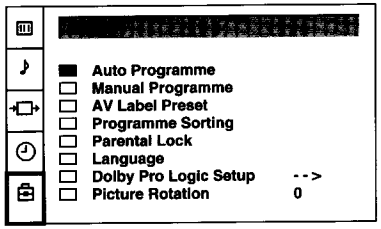
Setting Up Dolby Pro Logic

Before viewing Dolby Pro Logic encoded programmes, you have to set up the levels or modes of the speakers.
Normally this is required only when you install the TV and the speakers or change their positions.

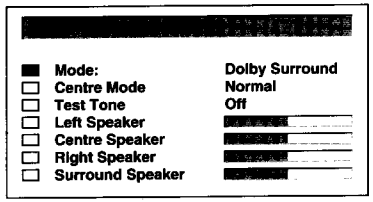
1 Press the MENU button ⓯.

2 Push joystick ⓱ to blue or green to select the symbol 🧰 on the menu screen then push to yellow.

3 Push to blue or green to select 'Dolby Pro Logic Setup' then push to yellow.



4 Push to blue or green to select 'Mode' then push to yellow.



5 Push to red or yellow to select the mode then press the joystick ⓱.

Dolby Pro Logic:	if you want to use all the five speakers
Dolby 3 Stereo:	if you do not want to use the surround speakers

6 Push to blue or green to select 'Centre Mode' then push to yellow.

7 Push to red or yellow to select the desired mode then press the joystick ⓱.

Normal:	if you want to activate all the speakers
Wide:	if you want a wider bandwidth sound effect
Phantom:	if you do not want to use the centre speaker

8 Push to blue or green to select 'Test Tone' then push to yellow.

9 Push to red or yellow to select 'On' then press the joystick ⓱.
The test tone cycles through all the speakers.

10 Push to blue to select 'Left Speaker' then push to yellow.
The test tone stays at the selected speaker only.

11 Push to red or yellow to adjust the sound level then press the joystick ⓱.

12 Push to blue or green to select another speaker then push to yellow.

13 Repeat steps 11 to 12 to adjust the sound levels of all the other speakers.

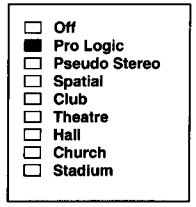
14 Press the MENU button ⓯ to restore the normal TV screen.

Presetting Dolby Pro Logic

With Dolby Pro Logic Surround mode selected, you can experience three dimensional sound when watching Dolby Surround encoded programmes.
To experience programmes encoded in Dolby Surround sound, preset the surround mode to 'Pro Logic' as shown below.

1 Press ♪ ⓮ on the remote commander.

2 Push joystick ⓱ to blue or green to select 'Pro Logic'.



3 Press ♪ ⓮ to restore the normal TV screen.

Or alternatively you can select 'Pro Logic' in the surround mode of the 'SOUND CONTROL' menu (see page 20)

Teletext

Most TV channels broadcast information via teletext. The index page of the broadcaster (usually page 100) gives you information on how to use the service.
Make sure you use a TV channel with a strong signal, otherwise teletext errors may occur.

Switching Teletext on and off

1 Select the channel which carries the teletext service you wish to view.

2 Press ☰ ❺ to display teletext.
If no teletext signal is broadcast, the indication P100 is displayed on a black screen.

3 Input three digits for the page number using the number buttons ㉓.
The page counter searches for the page and after some seconds the page is displayed.

4 Press ▢ ❻ to return to the normal TV picture.

Using Other Teletext Functions

To	Press
Access the next or preceding teletext page	☰▲ ㉖ for the next page or ☰▼ ㉖ for the preceding page
Mix the mode	☰ ❺ when in teletext mode. Now the teletext page is superimposed on the TV programme. Press again to return to the normal teletext display.
Freeze a teletext subpage	⊕ ⓴. Press once again to cancel.
Reveal hidden information (e.g.: answers to a quiz)	? ⓳. Press once again to cancel.

Favourite page system

You can store up to four of your favourite teletext pages per Teletext service. In this way you have quick access to the pages you frequently use.

Storing pages

1 Use the number buttons ㉓ to select the page you would like to store.

2 Press ㉑ twice.
The colour prompts at the bottom of the screen flash.

3 Push the joystick ⑰ to the desired colour to store the selected page.
The page is now stored on this colour.

Repeat steps 1 to 3 for the other 3 pages.

Displaying the Favourite Pages

1 Press ㉑.

2 Push the joystick ⑰ to the colour on which the desired page is stored.

Make sure you press ㉑, otherwise the normal Fastext facility operates.

Using Fastext

(only available, if the TV station broadcasts Fastext signals)

With Fastext you can access pages with one key stroke . When Fastext is broadcast, a colour-coded menu appears at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue marks ⑰ on the Remote Commander.

Push the joystick ⑰ to the colour mark which corresponds to the colour-coded menu. The page is displayed after some seconds.

Connecting Optional Equipment

There is a wide range of optional equipment you can connect to your TV. Refer to the illustrations on the front flap page of this manual.

Symbol	Acceptable input signals	Available output signals
1 L	Normal audio/video and RGB	Audio/video from TV tuner
2/ 2 M	Normal audio/video and S video	Audio/video from selected source
3, 3 B 3 C	Normal audio/video and S video	No output
K	No inputs	Audio from selected source.

Connecting Headphones

Plug in the headphones to the socket A on the front of the TV.

About S video input

Video signals may be separated into Y (luminance) and C (chrominance) signals. Separating the two signals prevents interference and thus improves the picture quality.

Notes on connections:

- If the picture or sound is distorted, move the VCR away from the TV.
- When connecting a monaural VCR, connect only the white jack to both the TV and VCR.
- Select 'TV' for output in the 'VIDEO CONNECTION' menu if you connect a decoder to 2/ 2 M (see page 34).

Selecting Input and Output Signals

This section explains how to select the output signal from 2/2 M and how to select and view the input. You can use direct access buttons 20 E to select the input or the menu system to select input and output.

Selecting Input Signals With Direct Access Buttons

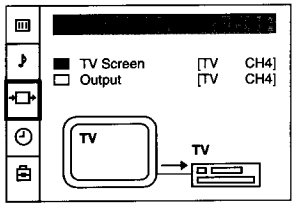
Press 20 E repeatedly .
Press 6 to restore the normal TV picture.

Symbol on the screen	Input Signal
1	Audio/video through Euro AV connector L
	RGB through Euro AV connector L
2	Audio/video through Euro AV connector M
2	S video through Euro AV connector M
3	Audio/video through the phono jacks C
3	S video through the 4 pin DIN B

Selecting With the Video Connection Menu

1 Press the MENU button 15.

2 Push joystick 17 to blue or green to select for "Video Connection" then push to yellow.



3 Push to blue or green to select 'TV Screen' (input source for the TV Screen) or 'Output' (output source for 2/2 M) then push to yellow 17.

4 Push to red or yellow repeatedly to select the desired input or output source then press the joystick 17.

5 Press the MENU button 15 to restore the normal TV picture.

Note: If you select 'AUTO' for output, the output source automatically becomes the same as the desired input source.

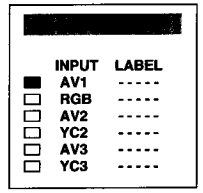
Using AV Label Preset

This function enables you to label the input sources using up to five characters (letters or numbers).

1 Press the MENU button 15.

2 Push joystick 17 to blue or green to select the symbol on the screen then push to yellow.

3 Push to blue or green to select 'AV Label Preset' then push to yellow.



4 Push to blue or green to select the desired input source then push to yellow.

5 Push to blue or green to select a letter or number then push to yellow (select '-' for a blank).
Select the other four characters in the same way.

6 After selecting all the characters, press the joystick 17.

7 Repeat steps 4 to 6 to label other input sources.

8 Press the MENU button 15 to restore the normal TV screen.

Remote Control of Other Sony Equipment

You can control other Sony remote controlled equipment using the buttons ❷ on the Remote Commander.

1 Set the VTR 1/2/3 MDP selector according to the equipment
VTR 1: Beta VCR
VTR 2: 8mm VCR
VTR 3: VHS VCR
MDP: Video Disk Player

2 Use the buttons ❷ to operate the equipment.

Notes:
- If your video equipment has a COMMAND MODE selector, set this selector to the same position as the VTR 1/2/3 MDP selector on the TV Remote Commander
- If the equipment does not have a certain function, the corresponding button on the Remote Commander does not work.

Troubleshooting

Here are some simple solutions to the problems which affect the picture and sound.

Problem	Solution
No picture (screen is dark), no sound	• Plug the TV in. • Press ⏻ I on the TV. (If ⏻ indicator H is on, press 🖵 ❻ or a programme number ㉓ on the Remote Commander.) • Check the aerial connection. • Check if the selected video source is on. • Turn the TV off for 3 or 4 seconds then turn it on again using ⏻ I.
Poor or no picture (screen is dark), but good sound	• Press MENU ⓯ to enter the 'PICTURE CONTROL' menu and adjust 'Contrast', 'Brightness' and 'Colour'.
Poor picture quality when watching an RGB video source.	• Press ⇨ ⓴ E repeatedly to select 📷.
Good picture but no sound	• Press 🔊 + ⓰ F. • If 🔇 is displayed on the screen, press 🔇 ❶. • Check the speaker lead connections.
No colour for colour programmes	• Press MENU ⓯ to enter the 'PICTURE CONTROL' menu, select 'Reset' then press the joystick ⓱.
Remote Commander does not function.	• Replace the batteries

If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.